

DESCRIPTION OF A NEW SPECIES OF CARYANDA STÅL FROM CHINA (ORTHOPTERA, ACRIDOIDEA)

FENG Li Xia¹, FU Peng^{1*}, ZHENG Zhe Min²

1. College of Life Sciences, Hunan Normal University, Changsha 410081, China

2. Institute of Zoology, Shaanxi Normal University, Xi'an 710062, China

Abstract A new species of *Caryanda* Stål of Catantopidae, namely *C. quadridenta* sp. nov., is described in the present paper. Type specimens are deposited in the Animal Museum of College of Life Sciences, Hunan Normal University.

Key words Acridoidea, *Caryanda*, new species, Chongqing, China.

The genus *Caryanda* was erected by Stål in 1878. Up to date, more than thirty five species have been known in the world. They are mainly distributed in the Southeast of Asia and the Median of Africa. Among them, twenty five species were recorded from China, and mainly from the South of Yangtze River (Liu *et* Yin, 1987; Zheng, 1993).

This paper adds one new species to the genus. Specimens of the new species were collected from Chongqing City, China. The type specimens are deposited in the Animal Museum of College of Life Sciences, Hunan Normal University.

Caryanda quadridenta sp. nov. (Figs. 1-6)

Male. Body small sized. Vertex convex, apex roundly angular, width in front of eyes 2 times length. Frons oblique, frontal ridge sulcated throughout, but getting shallow near clypeus. Antennae filiform, 22 segments, reaching base of hind femur, length of median segment 2.5 times width. Eyes long oval, longitudinal diameter about 1.4 times the horizontal diameter, and 2.1 times length of subocular furrow. Pronotum nearly cylindrical, anterior margin smooth, posterior margin with a small triangular breach in the middle; median keel indistinct, lateral keels absent; three transverse sulci clear, interrupting median keel; length of prozona 2.5 times that of metazona. Prosternal spine long conical, straight, apex pointed; length of interspace of mesosternal lobes about 2.0-2.2 times its minimum width; metasternal lobes contiguous behind. Tegmina squamiform, lateral, long oval, length 2.8 times the maximum width, reaching posterior margin of the first abdominal tergite. Apex of lower knee lobes of hind femur spinous; hind tibiae with inner and outer

spical spines. Tympanum distinct, oval. Posterior margin of the last tergite with two small furculae. Anal plate broadly triangular, with a shallow longitudinal sulcus in the middle of basal half. Cercus long conical, straight, apex pointed, beyond the top of anal plate. Subgenital plate short conical, apex blunt. Epiphallus and phallic complex as illustrated in Figs 4 and 5.

Color. Generally yellowish brown. Eyes brown. Frons and gena yellowish white. Tegmina darkly brown. Postocular bands dark, extending to 6th abdominal tergite and getting thinner. Fore and middle legs yellowish green; hind femur yellowish green, knees dark; hind tibia bluish green. Cercus dark, its apex darkly red.

Female. Body longer and thicker than male. Antennae reaching posterior margin of pronotum. Longitudinal diameter of eyes 1.4 times the horizontal diameter, and 1.9 times length of subocular furrow. Length of prozona 2.3 times that of metazona. Length of interspace of mesosternal lobes 1.4 times the minimum width. Length of tegmina 2.6 times the maximum width. Anal plate nearly long triangular, with a transverse furrow in the basal half from dorsal view. Subgenital plate nearly rectangular, its posterior margin with 4 small teeth (the middle of posterior margin concave a little, each side with 2 small teeth, Fig. 3).

Color. Same as male.

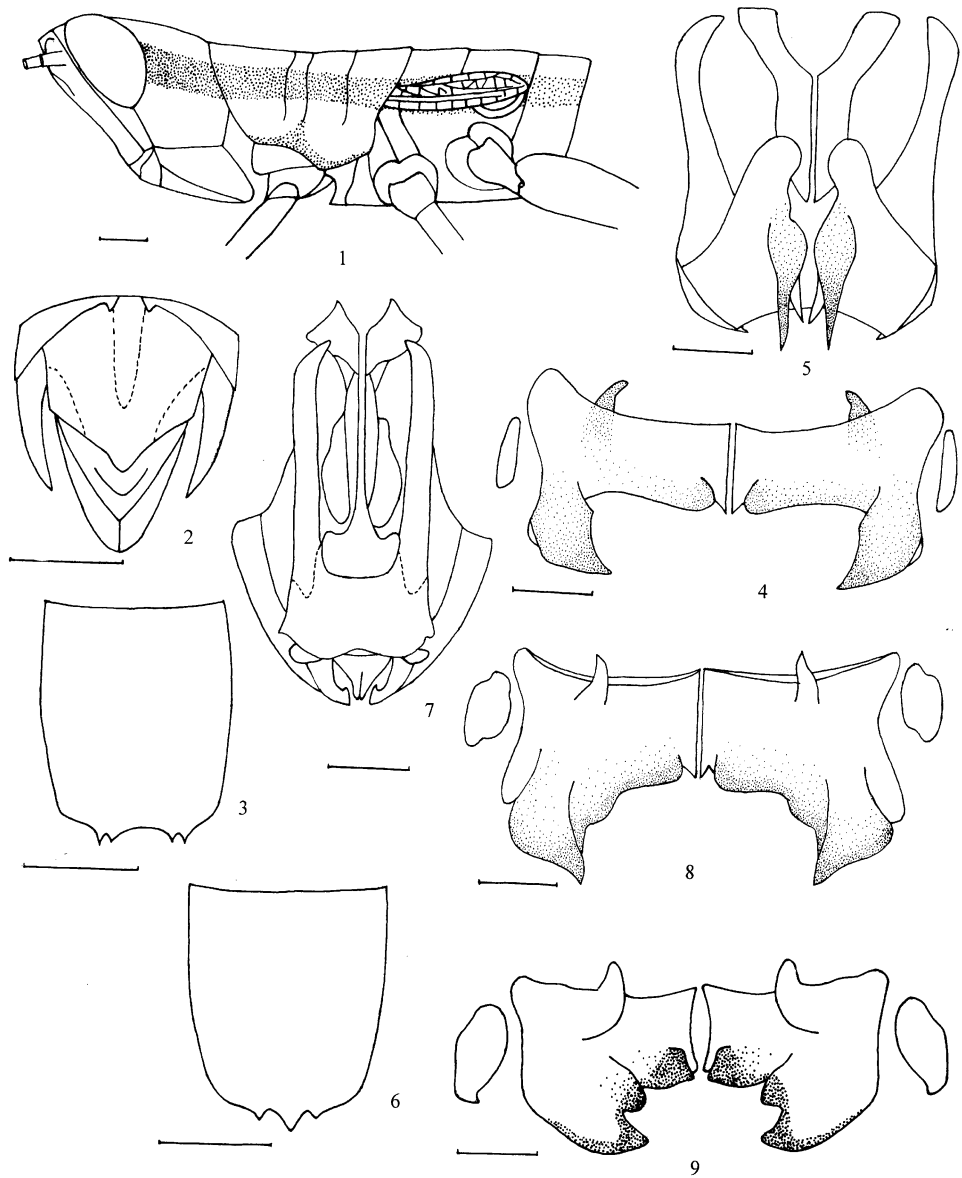
Length of body: ♂18.3-19.0 mm, ♀23-25 mm.
Length of pronotum: ♂3.6-3.8 mm, ♀4.7-5.0 mm.
Length of tegmina: ♂2.4-3.1 mm, ♀3.0-3.6 mm.
Length of hind femora: ♂11.0-12.0 mm, ♀13.3-15.0 mm.

Holotype ♂, Chongqing City, Mt. Simian (29°18' N, 106°16' E), 900 m, 6 Aug. 2003, collected

The work was supported by the Provincial Foundation of Hunan, China (99JJY20014).

* Corresponding author, E-mail: fupen@sohu.com; Tel: 0731-8827014

Received 16 Aug. 2004, accepted 4 Nov. 2004.



Figs. 1-6. *Caryanda quadridenta* sp. nov. 1. Anterior body of male, lateral view. 2. Apex of male abdomen, dorsal view. 3. Subgenital plate of female, ventral view. 4. Epiphallus, dorsal view. 5. Phallic complex, dorsal view. 6. Subgenital plate of female of *C. triodonta*. 7. Phallic complex of *C. triodonta*. 8. Epiphallus of *C. triodonta*. 9. Epiphallus of *C. vittata*. Scale bars: 1-3, 6= 1 mm; 4-5, 7-9= 0.1 mm.

by HUANG Jiar-Hua. Paratypes 9 ♂♂, 10 ♀♀, same data as holotype.

Fu et Zheng, 1994, but differs from the latter in the characters listed in Table 1.

This new species is similar to *Caryanda triodonta*

This new species is also similar to *Caryanda*

Table 1. Comparison between *C. quadridenta* sp. nov. and *C. triodonta* Fu et Zheng.

Characters	<i>C. quadridenta</i> sp. nov.	<i>C. triodonta</i> Fu et Zheng
Length of median segment of antennae (♂)	2. 2 times the width	2. 8 times the width
Length of tegmina (♂)	2. 8 times the width	3. 6 times the width
Subgenital plate (♀)	With 4 teeth (the middle of posterior margin concave a little, each side with two small teeth, Fig. 3)	With 3 teeth (the middle of posterior margin with a larger tooth, each side with a small tooth, Fig. 6)
Epiphallus	Anterior projection broadly round angle; dorsal lateral appendices like bar (Fig. 4)	Anterior projection acute angle; dorsal lateral appendices oval (Fig. 8)
Phallic complex	Apical valves of penis thin and sharp (Fig. 5)	Apical valves of penis thick and short, apex hooked (Fig. 7)

vittata Li *et* Jing, 1984, but differs from the latter in the characters listed in Table 2.

Table 2 Comparison between *C. quadridenta* sp. nov. and *C. vittata* Li *et* Jing.

Characters	<i>C. quadridenta</i> sp. nov.	<i>C. vittata</i> Li <i>et</i> Jing
Length of median segment of antennae (♂)	2.5 times the width	3 times the width
Subgenital plate (♀)	With 4 teeth (the middle of posterior margin concave a little, each side with two small teeth)	The middle of posterior margin with a triangular projection
Epiphallus	Bridge and lophi thinner and longer; dorsal lateral appendices like bar	Bridge and lophi thicker and shorter; dorsal lateral appendices oval (Fig. 9)

Acknowledgements We would like to thank Dr. HUANG Jiam Hua (Southwest Agricultural University, Chongqing) for providing us with specimens.

REFERENCES

Fu, P and Zheng, ZM 1994. Two new species of grasshopper of *Caryanda* from Mt. Wulingshan in Hunan (Orthoptera: Catantopidae). *Acta Zootaxonomica Sinica*, 19 (3): 333-337. [动物分类学报]
Fu, P and Zheng, ZM 2004. Description of two new species of Catantopidae from China (Orthoptera, Acridoidea). *Acta Zootaxonomica Sinica*, 29 (1): 101-104. [动物分类学报]

Li, TS and Jin, XB 1984. One new genus and four new species of locust from Dayao Mountains of Guangxi (Orthoptera: Acridoidea: Catantopidae). *Acta Entomologica Sinica*, 27 (2): 200-201.
Liu, ZW and Yin, XC 1987. A study of the genus *Caryanda* Stål (Orthoptera: Acrididae) from China. *Entomotaxonomia*, 9 (1): 53-60.
Ma, EB 2000. Description of a new species on *Caryanda* Stål and its chromosome G banding karyotype (Orthoptera: Acridoidea). *Oriental Insects*, 34: 333-334.
Zheng, ZM 1985. The grasshoppers from Yunnan, Guizhou, Sichuan, Shaanxi Province and Ningxia Huizu Zizhiqu. Science Press, Beijing. 141, 148-149.
Zheng, ZM 1993. Acritaxonomy. Shaanxi Normal University Press, Xi'an. 87-89.

中国卵翅蝗属一新种记述 (直翅目, 蝗总科)

冯丽霞¹ 傅 鹏^{1*} 郑哲民²

1. 湖南师范大学生命科学学院 长沙 410081
2. 陕西师范大学动物所 西安 710062

摘 要 记述了中国斑腿蝗科卵翅蝗属 1 新种: 四齿卵翅蝗 *C. quadridenta* sp. nov.。正模 ♂, 副模 9 ♂♂, 10 ♀♀, 中国重庆市四面山, 海拔 900 m, 2003-08-06, 黄建华采。新种模式标本均保存于湖南师范大学生命科学学院动物标本馆。

表 1

特征	四齿卵翅蝗, 新种 <i>C. quadridenta</i> sp. nov.	三齿卵翅蝗 <i>C. triodonta</i> Fu <i>et</i> Zheng
触角中段一节的长度 (♂)	2.2 倍于其宽度	2.8 倍于其宽度
前翅长 (♂)	2.8 倍于其宽度	3.6 倍于其宽度
下生殖板 (♀)	具 4 齿 (后缘中央略凹, 每边具 2 小齿, 图 3)	具 3 齿 (中齿较大, 每边具一小齿, 图 6)
阳茎背片	前突呈宽圆形; 背侧附片棒状 (图 4)	前突锐角形; 背侧附片卵圆形 (图 8)
阳茎复合体	阳茎端瓣细而尖 (图 5)	阳茎端瓣较短粗, 末端钩状 (图 7)

表 2

特征	四齿卵翅蝗, 新种 <i>C. quadridenta</i> sp. nov.	条纹卵翅蝗 <i>C. triodonta</i> Li <i>et</i> Jing
触角中段一节的长度 (♂)	2.5 倍于其宽度	3 倍于其宽度
下生殖板 (♀)	具 4 齿 (后缘中央略凹, 每边具 2 个小齿)	后缘中央呈三角形突出
阳茎背片	桥与冠突均较细长; 背侧附片棒状	桥与冠突均较短粗; 背侧附片卵圆形 (图 9)

关键词 蝗总科, 卵翅蝗属, 新种, 重庆, 中国.
中图分类号 Q969.265.1

* 通讯作者.